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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/766,305

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Philip L. Bohannon

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9365

7590

08/23/2006

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EXAMINER

ADAMS, CHARLES D

ART UNIT

PAPER NUMBER

2164

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/766,305

Applicant(s)

BOHANNON ET AL.

Examiner

Charles D. Adams

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**SAM RIMELL**  
**PRIMARY EXAMINER**

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1-28-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 7 objected to because of the following informalities: each claim must begin with a capital letter and end with a period. See MPEP § 608.01(m). Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-4, 7-10 and 12-19 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims do not recite a practical application by producing a physical transformation or producing a useful, concrete, and tangible result. To perform a physical transformation, the claimed invention must transform an article or physical object into a different state or thing. Transformation of data is not a physical transformation. A useful, concrete, and tangible result must be either specifically recited in the claim or flow inherently therefrom. To be useful the claimed invention must establish a specific, substantial, and credible utility. To be concrete the claimed invention must be able to produce the same results given the same initial starting conditions. To be tangible the claimed invention must produce a practical application or real world result.

Art Unit: 2164

In this case the claims fail to perform a tangible result, though a determination occurs, nothing is done upon evaluating the results of this determination. Thus, there is no tangible result of the claims.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 5-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "the deleted node" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitations "the database" in line 4, "the correlation predicates" in line 4, "the inserted subtree" in line 5, "the key of the element base view" in lines 5-6, "said corresponding tuple" in line 7, and "the foreign-key values" in line 7. There is insufficient antecedent basis for these limitations in the claim.

Claim 7 recited the limitation "the view" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the element base view" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 2164

Claim 9 recites the limitations “the leaf node” in line 2 and “the element base view” in line 4. There is insufficient antecedent basis for these limitations in the claim.

Claim 10 recites the limitations “the parent node” in line 2 and “the element base view” in line 4. There is insufficient antecedent basis for these limitations in the claim.

Claim 11 recites the limitations “the parent node” in line 2, “the view” in lines 2-3, “the database” in line 5, “the correlation predicate(s)” in line 5, “the inserted subtree” in lines 5-6, “the key of the element base view” in line 6, “the foreign-key values” in line 7-8, and “the corresponding tuple” in line 9. There is insufficient antecedent basis for these limitations in the claim.

5. The claims contain subject matter that is optionally recited. As such, the claims bear no patentable weight. See MPEP § 2106 Section II(C):

The subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:

- (A) statements of intended use or field of use,
- (B) “adapted to” or “adapted for” clauses,
- (C) “wherein” clauses, or
- (D) “whereby” clauses.

This list of examples is not intended to be exhaustive. >See also MPEP § 2111.04.<

Claims 6-11 are optionally recited.

Claim 6 recites the limitation “only if” a condition is met. This renders the following subject matter indefinite, as that step may not occur.

Art Unit: 2164

Claims 7-11 recite the limitation "permitted only when". This renders the following subject matter indefinite, as that step may not actually occur.

Claim 11 recites the limitation "if the inserted node contains new values" in lines 9-10. This renders the following subject matter indefinite, as that step may not actually occur.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 4, 12, 15-16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barsalou et al. ("Updating Relational Databases through Object-Based Views") in view of Wang et al. ("Updating XQuery Views Published over Relational Data: A Round-trip Case Study").

As to claim 1, Barsalou et al. does not teach a method for determining if an update to an XML document can be reflected in an underlying relational database,

Wang et al. teaches a method for determining if an update to an XML document can be reflected in an underlying relational database, wherein said XML document is comprised of a tree of nodes (see page 1, first paragraph)

Art Unit: 2164

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Barsalou et al. by the teaching of Wang et al., since Wang et al. teaches that "XML has become the standard for interchanging data between web applications because of its modeling flexibility" (page 1, first paragraph)

Barsalou et al. as modified teaches:

Assigning at least one of a plurality of categories to each of said nodes, wherein said plurality of categories are based on a cardinality relationship indicated by one or more correlation predicates and one or more foreign key constraints in said underlying relational database (see Barsalou et al. page 255, column 2. Foreign key constraints are used, and page 249, "The Structural Model", and page 253, column 1);

Determining whether said update to said XML document can be reflected in said underlying relational database based on said assigning category (see Barsalou et al. page 253, section 5 "Updating through View Objects". Updates require local validation against the view-object definition and global validation against the structural model).

As to claim 4, Barsalou et al. as modified teaches further comprising the step of determining an update execution strategy based on said assigning category (see Barsalou et al. page 253, column 2, paragraph 1).

Art Unit: 2164

As to claim 12, Barsalou et al. does not teach a system for determining if an update to an XML document can be reflected in an underlying relational database, wherein said XML document is comprised of a tree of nodes,

Wang et al. teaches a system for determining if an update to an XML document can be reflected in an underlying relational database, wherein said XML document is comprised of a tree of nodes (see page 1, first paragraph)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Barsalou et al. by the teaching of Wang et al., since Wang et al. teaches that "XML has become the standard for interchanging data between web applications because of its modeling flexibility" (page 1, first paragraph).

Barsalou et al. as modified teaches:

a memory (see Wang et al. page 234);

At least one processor, couple to the memory (see Wang et al. page 234), operative to:

Assign at least one of a plurality of categories to each of said nodes, wherein said plurality of categories are based on a cardinality relationship indicated by one or more correlation predicates and one or more foreign key constraints in said underlying relational database (see Barsalou et al. page 255, column 2. Foreign key constraints are used, and page 249, "The Structural Model", and page 253, column 1); and

Determine whether said update to said XML document can be reflected in said underlying relational database based on said assigning category (see



Art Unit: 2164

Barsalou et al. page 253, section 5 “Updating through View Objects”. Updates require local validation against the view-object definition and global validation against the structural model).

As to claim 15, Barsalou et al. as modified teaches wherein said processor is further configured to determine an update execution strategy based on said assigning category (see Barsalou et al. page 253, column 2, paragraph 1).

As to claim 16, Barsalou et al. does not teach an article of manufacture for determining if an update to an XML document can be reflected in an underlying relational database, wherein said XML document is comprised of a tree of nodes,

Wang et al. teaches an article of manufacture for determining if an update to an XML document can be reflected in an underlying relational database, wherein said XML document is comprised of a tree of nodes, (see page 1, first paragraph)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Barsalou et al. by the teaching of Wang et al., since Wang et al. teaches that “XML has become the standard for interchanging data between web applications because of its modeling flexibility” (page 1, first paragraph)

Barsalou et al. as modified teaches:

Assigning at least one of a plurality of categories to each of said nodes, wherein said plurality of categories are based on a cardinality relationship

Art Unit: 2164

indicated by one or more correlation predicates and one or more foreign key constraints in said underlying relational database (see Barsalou et al. page 255, column 2. Foreign key constraints are used, and page 249, "The Structural Model", and page 253, column 1); and

Determining whether said update to said XML document can be reflected in said underlying relational database based on said assigning category (see Barsalou et al. page 253, section 5 "Updating through View Objects". Updates require local validation against the view-object definition and global validation against the structural model).

As to claim 19, Barsalou et al. as modified teaches wherein said processor is further configured to determine an update execution strategy based on said assigning category (see page 253, column 2, paragraph 1).

### ***Allowable Subject Matter***

8. Claims 5, 6, and 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Adams whose telephone number

Art Unit: 2164

is (571) 272-3938. The examiner can normally be reached on 8:30 AM - 5:00 PM, M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Charles Adams  
AU 2164



**SAM RIMELL**  
**PRIMARY EXAMINER**